

RISK FACTORS AND SECURITY ISSUES INHERENT IN ONLINE BANKING

WITH REFERENCE TO THE GHAZIABAD REGION

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ABSTRACT

Online banking, also known as Internet Banking, e-banking or virtual banking, is an electronic payment system that enables customers of a Bank or other financial institution to conduct a range of Financial transactions through the financial institution's website. With the extensive use of technology particularly internet by users, banking is becoming more dependent on technology. Unfortunately, with this the cyber-crimes related to banks are also increasing stupendously. Banks have taken a lot of steps for safety and security of their assets, yet these conventional security mechanisms are no longer optimum as still attackers are able to bypass these security mechanisms.[1]

In this paper, we will discuss about the risk factors and security issues inherent in Online Banking.

1. INTRODUCTION

1.1 WHAT IS ONLINE BANKING

Internet banking refers to the use of Internet as a remote delivery channel for banking services such as opening a deposit account or transferring funds at different accounts etc. Further, it is a desirable opportunity for banks where the key to success is customer adoption. There is evolution in development of internet banking.[2]

1.2 HISTORY OF ONLINE BANKING:

Online banking was first started in 80's. The term online became famous in the late '80s. Online banking during the formative years included usage at terminal, keyboard and TV (or monitor) with an intention to approach the banking system using a phone line. Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotext system. It was Stanford Federal Credit Union which offered online internet banking services to all of its customers. Internet banking refers to the use of Internet as a remote delivery channel for banking services such as opening a deposit account or transferring funds at different accounts etc. Further, it is a desirable opportunity for banks where the key to success is customer adoption. There is evolution in development of internet banking.[3]

2. LITERATURE REVIEW

- Kesharwani and Bisht (International Journal of Bank Marketing, Vol. 30 No. 4, 2012, pp. 303-322.): attempted to extend the technology acceptance model (TAM) in the context of internet banking adoption in India under security and privacy threat. The study revealed that perceived risk had a negative impact on behavioral intention of internet banking adoption and trust had a negative impact on perceived risk. A well-designed web site was also found to be helpful in facilitating easier use and also minimizing perceived risk concerns regarding internet banking usage.[4]
- Singh and Kaur (Internet Banking: Content Analysis Of Selected Indian Public And Private Sector Banks' Online Portals, vol. 17, No.1, pp. 1-7, 2012): compared the pre-login and after login features of two banks' online portals in India. A content analysis technique was used to study the listed features of selected websites. Study found that selected banks' online portals differ on various features such as accounts information, fund transfer, online requests and general information. In the end, study suggested to include the good feature of other online portal which would help them to make their sites more secure, informative and user friendly.[5]
- Thakur and Srivastava (Journal of Indian Business Research Vol. 5 No. 1, pp. 52-72. 2013): investigated the factors influencing the adoption intention of mobile commerce. For the study purpose research model was developed based on constructs from the technology acceptance model and innovation resistance theory. Perceived usefulness, perceived ease of use and social influence were found to be significant dimensions of technology adoption readiness to use mobile commerce while facilitating conditions were not found to be significant. The results also indicated perceived credibility risk defined by security risk and privacy risk was significantly associated with behavioural intention in negative relation, which indicated that security and privacy concerns are important in deterring customers from using mobile commerce.[6]

3. OBJECTIVES OF THE STUDY

Here are the Objectives of the Study:

1. To determine how often people uses online banking services and to determine the challenges faced by the users of online banking.
2. To understand the opinion of non-users of e-banking services.
3. To determine the opinions of banking customers regarding security issues and risk factors inherent in online banking.

4. RESEARCH METHODOLOGY

- **Type of research:** Exploratory research: It is an examination into a subject in an attempt to gain further insight. With ER, a researcher starts with a general idea and uses research as a tool to identify issues that could be the focus of future research.
- **Population:** Ghaziabad is a city in the Indian state of Uttar Pradesh. Ghaziabad district covers **133.3 km²** (51.5 sq mi).
- **Sample size:** 30
- **Data collection instrument:** Data can be classified into two types:
 - Primary data: Primary data is the original data collected by researcher himself for a specific purpose.

Primary Data Collection Methods:

- ✓ Interviews
- ✓ Questionnaires and Surveys
- ✓ Observations
- ✓ Focus group Interviews
- ✓ Ethnographies, Oral History, and Case Studies

- Secondary data: Secondary data is not original it is collected by somebody else for some other purpose.

Secondary Data Collection Methods

- ✓ Documents
- ✓ Notes
- ✓ Letters
- ✓ Internet

I have used both primary and secondary data

5. HYPOTHESIS

- **H0 – There is no significant improvement in cyber security measures in online banking in India.**
- **H1 – There is significant improvement in cyber security measures in online banking in India.**

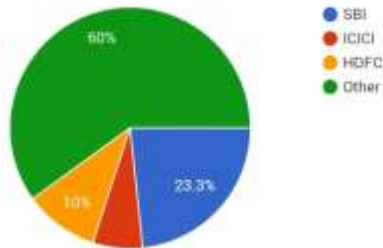
6. DATA ANALYSIS AND INTERPRETATION

Analysis and Interpretation of data collected with the help pie charts:

PIE CHART 1:

In Which bank do you have an Account?

30 responses



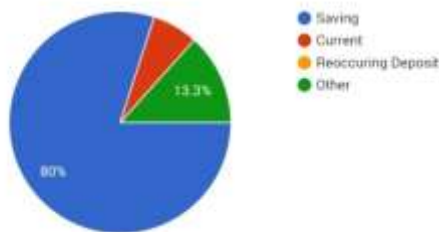
OPTIONS	RESPONSES	%
SBI	7	60
ICICI	2	6.66
HDFC	3	10
OTHER	18	23.3

DATA INTERPRETATION: This chart is showing the preference of the customers for the banks. Chart is representing that 60% of respondents are having their Account in banks other than SBI, ICICI, HDFC.

PIE CHART 2:

Which type of Account do you have in your bank?

30 responses



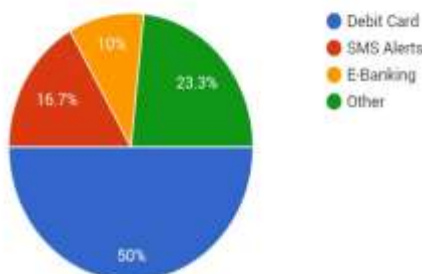
OPTIONS	RESPONSES	%
SAVING	24	80
CURRENT	2	6.7
RD	0	0
OTHER	4	13.3

DATA INTERPRETATION: Chart 2 is showing the types of Accounts the Respondents are having in their respective banks. Here, we can see that 80% respondents are having Savings account in their banks which is positive aspect that most of the people are having a habit of savings.

PIE CHART 3

Which add on service do you avail by the bank?

30 responses

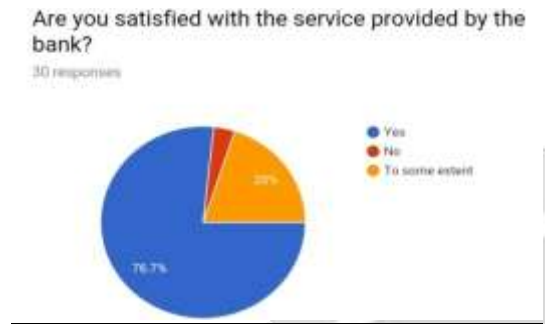


OPTIONS	RESPONSES	%
DEBIT CARD	15	50
SMS ALERTS	5	16.7
E-BANKING	3	10
OTHER	7	23.3

DATA INTERPRETATION: Chart 3 is showing the customers preferences for the Add on

service availed by the banks. This represents that 50% respondents prefer Debit card facility.

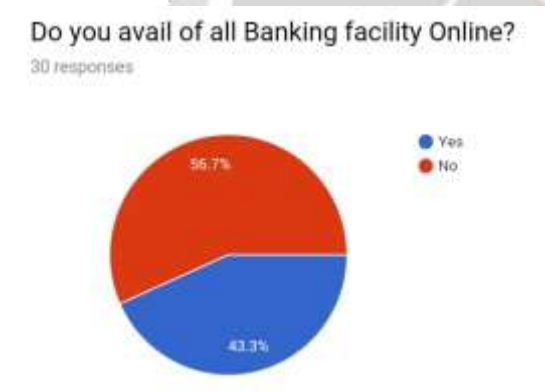
PIE CHART 4



OPTIONS	RESPONSES	%
YES	23	76.7
NO	1	3.3
TO SOME EXTENT	6	20

DATA INTERPRETATION: The above chart is showing the customer satisfaction about the services provided by their banks. This chart is representing that 76.7% of respondents are satisfied with the services of banks.

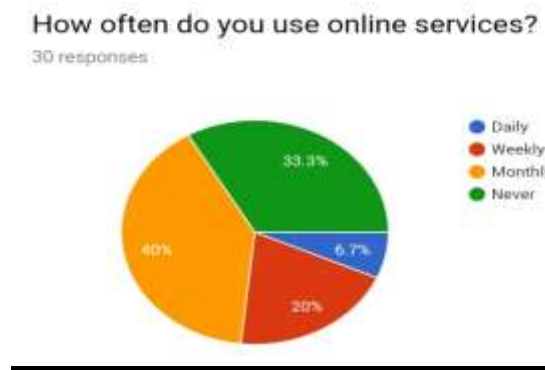
PIE CHART 5



OPTIONS	RESPONSES	%
YES	13	43.3
NO	17	56.7

DATA INTERPRETATION: Pie chart 4 is showing that how much percent customers avail all online banking facilities. Hence, we can see that 43.3% respondents are availing all online banking facilities.

PIE CHART 6

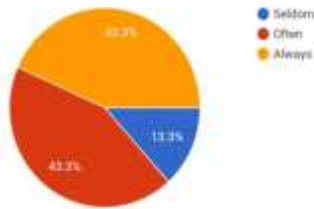


OPTIONS	RESPONSES	%
DAILY	2	6.7
WEEKLY	6	20
MONTHLY	12	40
NEVER	10	33.3

DATA INTERPRETATION: This chart is representing how often do respondents use Online services. Here, we can see that 40% respondents are using online services Monthly.

PIE CHART 7

What is your Internet Usage Rate?
30 responses

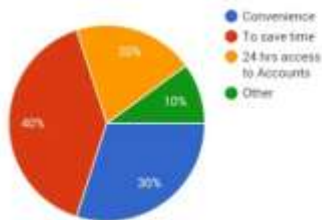


OPTIONS	RESPONSES	%
SELDOM	4	13.3
OFTEN	13	43.3
ALWAYS	13	43.3

DATA INTERPRETATION: This chart is showing Internet usage rate of the respondents. Here, we can see that 43.3% respondents are using internet Often and Always.

PIE CHART 8

What were your reasons for choosing online banking services?
30 responses



OPTIONS	RESPONSES	%
CONVENIENCE	9	30
TO SAVE TIME	12	40
24 HRS ACCESS TO ACCOUNTS	6	20
OTHER	3	10

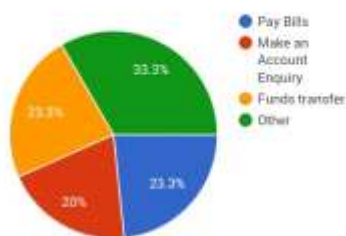
DATA INTERPRETATION: This chart is showing the reasons for choosing online banking services by the customers. We can see that 40% respondents are choose online banking to save time.

PIE CHART 9

OPTIONS	RESPONSES	%
PAY BILLS	7	23.3
MAKE AN ACCOUNT ENQUIRY	6	20
FUND TRANSFER	7	23.3
OTHER	10	33.3

Which online features do you use regularly?

30 responses

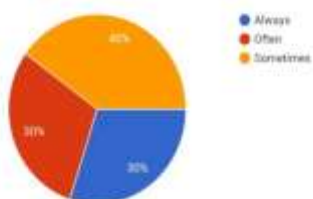


DATA INTERPRETATION: This chart is representing the features used by the respondents regularly.

PIE CHART 10

Do you always get prompt services whenever you use online banking?

30 responses



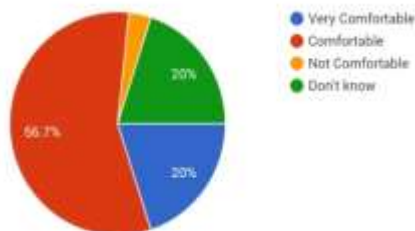
OPTIONS	RESPONSES	%
ALWAYS	9	30
OFTEN	9	30
SOMETIMES	12	40

DATA INTERPRETATION: This chart is showing how prompt the customers are getting services while using online banking. We can see that 40% respondents are getting prompt service Sometimes.

PIE CHART 11

How comfortable do you feel while using Online Banking?

30 responses

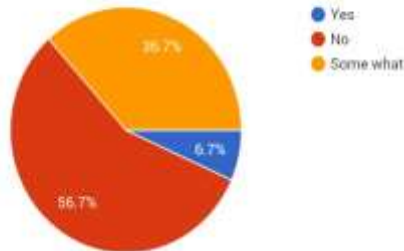


OPTIONS	RESPONSES	%
VERY COMFORTABLE	6	20
COMFORTABLE	17	56.7
NOT COMFORTABLE	1	3.3
DON'T KNOW	6	20

DATA INTERPRETATION: Chart 11 is representing the comfort level of the customers while using online banking. It represents that 56.7% customers feel Comfortable using online banking.

PIE CHART 12

Do you fear using Online banking services?
30 responses

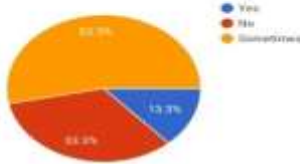


OPTIONS	RESPONSES	%
YES	2	6.7
NO	17	56.7
SOME WHAT	11	36.7

DATA INTERPRETATION: This chart is showing the percent of customers using online banking services. Here, we can see that 56.7% customers do not fear using online banking.

PIE CHART 13

Do you prefer going bank instead of using online services provided by the bank to get your work done?
30 responses

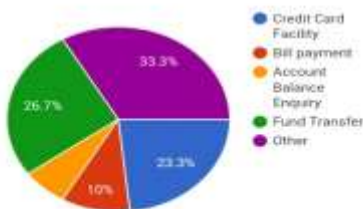


OPTIONS	RESPONSES	%
YES	4	13.3
NO	10	33.3
SOMETIMES	16	53.3

DATA INTERPRETATION: Chart 13 represents the customers preference for going banks for their work instead of using online services. Only 13.3% customers prefer going bank always to get their work done.

PIE CHART 14

Which Online Service fears you the most because of which you visit your bank to get your work done?
30 responses



OPTIONS	RESPONSES	%
CREDIT CARD FACILITY	7	23.3
BILL PAYMENT	4	10
ACCOUNT BALANCE ENQUIRY	2	6.7
FUND TRANSFER	8	26.7
OTHER	10	33.3

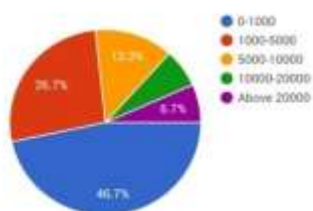
DATA INTERPRETATION: This chart is

representing the online service fears the most of the customers because of which they go to bank branch. Here, we can see that most of the customers i.e, 33.3% fear other online services.

PIE CHART 15

How much do you spend for a single online transaction?

30 responses



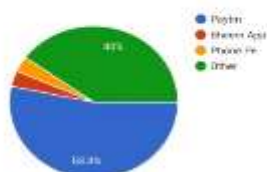
OPTIONS	RESPONSES	%
0-1000	14	46.7
1000-5000	8	26.7
5000-10000	4	13.3
10000-20000	2	6.7
ABOVE 20000	2	6.7

DATA INTERPRETATION: Chart 15 is showing how much do the customers spend for single transaction. We can see that 46.7% customers spend between 0-1000 Rs.

PIE CHART 16

Which payment application (cashless) do you use?

30 responses



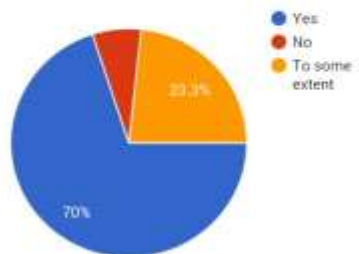
OPTIONS	RESPONSES	%
PAYTM	16	53.3
BHEEM APP.	1	3.35
PHONE PE	1	3.35
OTHER	12	40

DATA INTERPRETATION: This chart is representing the customer preference for various cashless payment applications in India. Here, we can see that 53.3% customers are using Paytm.

PIE CHART 17

Do you think online banking has made your life easier?

30 responses

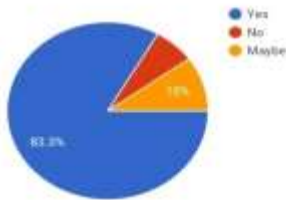


OPTIONS	RESPONSES	%
YES	21	70
NO	2	6.7
TO SOME EXTENT	7	23.3

DATA INTERPRETATION: This chart represents the role of Online banking in making the life customers easier. Here, chart is showing that 70% customers think that online banking has made their life easier.

PIE CHART 18

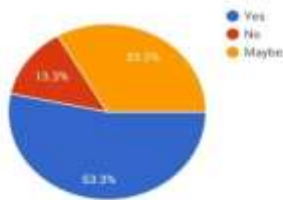
How many times you faced any fraudulent activity happening with your Account?
 Do you think banks should improve their Security mechanism/services?
 30 responses



OPTIONS	RESPONSES	%
ONCE	2	6.7
MORE THAN ONE TIME	1	3.3
NEVER	27	90

DATA INTERPRETATION: Chart 18 is showing the customers who have faced fraudulent activities happening with their Accounts. We can see that 90% customers have never faced such frauds.

Do you think Cash-less economy will be safer than the Cashful economy?
 30 responses



OPTIONS	RESPONSES	%
YES	17	53.3
NO	4	13.3
MAYBE	9	33.3

PIE CHART 19

DATA INTERPRETATION: This chart is showing the customers view point whether Cash-less economy will be safer than the cash full economy or not. We can see that 53.3% customers think it will be safer than cash full economy.

PIE CHART 20

OPTIONS	RESPONSES	%
YES	26	83.3
NO	1	6.7
MAYBE	3	10

DATA INTERPRETATION: Chart 20 is representing the views of customers whether banks should improve their security mechanism and services or not. Most of the customers i.e, 83.3% think that banks should improve their security mechanisms.

So, this was all the analysis and interpretation of the questionnaire along with pie chart representations.

7. FINDINGS

Findings emerged from the study have been presents as under:

- ✓ HDFC Bank and ICICI Bank have provided the direct link to their online banking services from the Home page of the main website. On the other hand SBI and PNB have exclusive portal for online banking services.
- ✓ HDFC and ICICI Bank have the facility of generation of password online but in case of SBI Bank one has to visit the branch to request for new password.
- ✓ All the selected banks display last login time and date on their portals.
- ✓ The option to assign maximum transfer limit to account is another security feature. All the selected banks have his facility in their internet banking.
- ✓ Study found that adoption rate of credit card usage is low and security and privacy concern is high.

8. SUGGESTIONS

- There seems to be risk in generating the internet banking password online. In researcher's opinion if user forget password, it should be issued offline only after proper verification of the user.
- It is suggested that banks should make it compulsory to change the login password and transaction password after a specified duration.
- Bank should educate the customers about how to use internet banking.
- Bank should use newspapers, television, radio, internet and mobile to make the customers aware about usefulness of mobile banking.
- Proper security and privacy be provided to mobile banking users because that is the main reason for not adopting this technology.
- Bank should educate customers about security tips of credit card usage such as use of CVV, use of genuine site (https) for online shopping through credit card etc.

9. CONCLUSION

At the end of this research we can conclude that customers are quite aware of Internet Banking but the adoption rate is not so high. Cloning of cards takes place only if fraudster secures information about the card by using skimming technique. Thus, bank should educate the customers about ways to avoid skimming by holding educational sessions of customers and transmitting security tips in mass media. Internet and mobile should widely be used for this purpose. Bank should use biometric. ATM machines to prevent the hacking of password and these can be used even by an illiterate person. It is found that bank customers are not very much aware of mobile banking and adoption rate is low. Keeping in mind the huge potential of mobile baking in India, it is suggested that bank should focus on mobile banking awareness. Study found that security and privacy concern is high.

10. REFERENCES

Books, Journals, Reports, Newspapers

1. International Journal of Computer Applications (0975 – 8887) Volume 144 – No.3, June 2016
2. https://www.coursehero.com/file/p9b3m2p/Internet-banking-reference-to-the-use-of-Internet-as-a-remote-delivery-channel-for/?e_pi_=7%2CPAGE_ID10%2C9499161109
3. Journal of Internet Banking and Commerce: <http://www.icommercentral.com/open-access/the-electronic-banking-revolution-in-india.php?aid=59261>
4. Kesharwani, Ankit and Bisht, Shailendra Singh (2012), ‘The impact of trust and perceived risk internet banking adoption in India: An extension of technology acceptance model’, International Journal of Bank Marketing, Vol. 30 No. 4, 2012, pp. 303-322.
5. Singh Tejinderpal, Kaur Manpreet (2012), ‘Internet Banking: Content Analysis Of Selected Indian Public And Private Sector Banks’ Online Portals’, vol. 17, No. 1, pp. 1-7.
6. Thakur, Rakhi and Srivastava, Mala (2013), ‘Customer usage intention of mobile commerce in India: an empirical study’, Journal of Indian Business Research Vol. 5 No. 1, pp. 52-72.

